

### **Remarks**

Based upon entry of the Applicants' amendment filed May 14, 2010, claims 1-11, 14-21 and 28-32, and 34-36 were pending in the application.

In the current amendment, claims 1 and 21 have been amended to incorporate the features of dependent claims 35 and 36, respectively. Claims 10, 35, and 36 have been cancelled.

Upon entry of the current amendment, claims 1-9, 11, 14-21, 28-32, and 34 will be pending and in front of the Examiner for consideration.

#### ***37 C.F.R. § 1.131 Declaration***

Submitted herewith is a revised declaration under 35 U.S.C. 103(a) signed by inventors Dale G. Swan and Ronald F. Ofstead. The declaration does not include the signature of Stephen J. Chudzik, as he was deceased as of October 27, 2007.

The revised declaration under 37 C.F.R. § 1.131 is believed to address the issues reiterated in the current Office action (originally raised in the Office action mailed November 16, 2009), and is discussed with regards to the rejection under 35 USC § 103.

#### ***Claim Rejections***

##### ***35 USC § 103 – Chudzik, Hubbell, Hubbell 870, Scharp and Sawhney***

The Office rejected claims 1-11, 14-21, 28-32, and 34-36 under 35 U.S.C. 103(a) as assertedly being unpatentable over Chudzik, *et al.* (U.S. Patent No. 7,094,418 B2; herein "Chudzik") or Hubbell, *et al.* (U.S. Patent No. 5,529,914; herein "Hubbell") or Hubbell, *et al.* (U.S. Patent No. 6,258,870 B1; herein "Hubbell 870") in view of Scharp, *et al.* (U.S. Patent No. 7,427,415; herein "Scharp"), and if necessary in further view of Sawhney, *et al.* (U.S. Patent No. 6,217,894; herein "Sawhney").

Applicants traverse the rejection. The subject matter of the claims as currently amended, supported by the revised declaration under 37 C.F.R. § 1.131, is patentable over the cited art.

#### **• Scharp**

Applicants respectfully request reconsideration and withdrawal of the rejection in view of the revised declaration under 37 CFR § 1.131, submitted herewith, showing invention prior to the effective date of Scharp.

Applicants note that independent claims 1 and 21 have been amended to recite that the biocompatible functional group is selected from the group consisting of phosphonate ( $\text{PO}_3^-$ ), sulfonate ( $\text{SO}_3^-$ ), and carboxylate ( $\text{COO}^-$ ). Independent claim 32 recites a sulfonate group in the biocompatible functional group.

U.S. Patent Application No. 10/684,859 (which ultimately issued as U.S. Patent No. 7,427,415 to Scharp *et al.*, on September 23, 2008) claims it earliest priority to U.S. provisional patent application No. 60/419,015, filed October 11, 2002.

Inventors Swan and Ofstead declare that the invention claimed in the above-identified application was conceived and reduced to practice in the United States of America *prior to* October, 2002. This declaration under 37 C.F.R. § 1.131 by Swan and Ofstead is supported by attached exhibits 1-14. Exhibits 1-13 include proposals, synthetic schemes, and experimental data describing the preparation of polymerization accelerators having biocompatible functional groups, and the use of these accelerators for preparing biocompatible polymeric matrices, which can be formed in the presence of tissue or cells.

Exhibit 14 consists of U.S. Patent No. 6,669,994 (issued Dec. 30, 2003) including Dale G. Swan as an inventor. U.S. Patent No. 6,669,994 and the current application are commonly assigned to SurModics, Inc. The application leading to the '994 patent (U.S. 09/840,406) was filed in the U.S. Patent Office on April 23, 2001, and was pending in the U.S. Patent Office prior to October 2002, during which the invention claimed in the above-identified application was conceived and reduced to practice.

The 09/840,406 patent application shows that prior to October 2002, Dale G. Swan had contemplated sulfonate, phosphonate, and carboxylate groups as biocompatible functional groups. Column 13, lines 40-43, of the 09/840,406 patent application states, "Examples of suitable charged groups include salts of organic acids (e.g., sulfonate, phosphonate, and carboxylate groups), as well as combinations thereof." Column 13, lines 40-43, states, "Additionally, such charged groups provide a combination of such desirable characteristics as antithrombogenicity and hemocompatibility."

Therefore, the 09/840,406 application shows that Dale G. Swan had possession of the claimed invention prior to October 2002 because, as evidenced by 09/840,406, it was obvious to Dale G. Swan to include phosphonate and carboxylate along with sulfonate as

biocompatible functional groups. MPEP 715.02 and *In re Spiller*, 500 F.2d 1170, 182 USPQ 614 (CCPA 1974).

Taken together, exhibits 1-14 show that each feature of the independent claims (claims 1, 21, and 32) was made, or obvious to the inventors, prior to the effective date of Scharp. Consequently, Scharp cannot serve as prior for the rejection of the pending claims.

• **Chudzik or Hubbell '914 or Hubbell '870 and Sawhney**

The current claims are non obvious over the cited references of Chudzik or Hubbell '914 or Hubbell '870 in view of Sawhney.

As noted by the Office, Chudzik discloses a composition containing a cross-linkable macromer and an accelerator, and also discusses N-vinyl caprolactam as an accelerator at column 11, line 14, in Chudzik. Hubbell '914 or Hubbell '870 refers to N-vinyl pyrrolidinone in claims 1, 67, and 68 (Hubbell '914) and 1, 30, and 31 (Hubbell '870) as an accelerator for its polymerization method. Like Chudzik and Hubbell '914 or Hubbell '870, Sawhney refers to N-vinyl caprolactam and to N-vinyl pyrrolidinone (col. 11, lines 38-43) as possible accelerators.

However, there is no teaching or suggestion in any of Chudzik, Hubbell '914, or Hubbell '870, or Sawhney of modifying N-vinyl caprolactam or N-vinyl pyrrolidinone to provide a polymerization accelerator with a sulfonate, phosphonate, or carboxylate biocompatible functional group according to the application, in the polymerizable composition as currently claimed. As such, the current claims are non-obvious over these references.

Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 103.

**Conclusion**

In view of the above remarks, it is respectfully submitted that the foregoing is fully responsive to the outstanding Office action. Favorable consideration and notice of allowance of the pending claims is earnestly solicited. In the event that a phone conference between the Examiner and Applicants' representative would help resolve any issues in the application, the Examiner is invited to contact undersigned at the number below.

Applicant: Swan, *et al.*  
Serial No.: 10/723,505  
Filed: November 26, 2003  
Title: BIOCOMPATIBLE POLYMERIZATION ACCELERATORS

Examiner: Naff, David M.  
Group Art: 1657  
Confirmation No.: 8953  
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Respectfully Submitted,

Date: 08 FEB, 2011

By:



Paul L. Weaver, Reg. No. 48,640

**Customer No. 72870**

Phone: 651/275-9835

Fax: 651/351-2954

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